

CLAIMS

1. An image management system connected to receive messages from a plurality of image producing devices coupled to a network, the image management system comprising:
a plurality of storage devices, each storage device having cost and operating characteristics which differ from the other storage devices;

5 means for receiving over the network from image producing devices messages which contain image data and metadata, said metadata containing information related to the image data and the image producing device;

a buffer for storing image data in a received message coupled to the means for receiving;

10 processor means coupled to the means for receiving to process metadata in a received message to determine in accordance with a stored rule which one of the plurality of storage devices should store the associated image data; and

archiving means responsive to the determination made by the processor means to transfer the image data in the buffer to said one storage device.

2. The image management system as recited in claim 1 which includes database management means responsive to the determination made by the processor means to store the metadata in a database.

3. The image management system as recited in claim 1 which includes an enterprise authority manager coupled to the means for receiving, the enterprise authority manager storing information on each image producing device authorized to store images in the image management system, and being operable to determine if a message received over
5 the network is from an authorized image producing device.

4. The image management system as recited in claim 3 in which the enterprise authority manager stores information indicative of the data type appropriate for an authorized image producing device.

5. The image management system as recited in claim 4 in which the means for receiving also includes means for receiving messages over the network from users requesting access to stored images and associated stored metadata, and in which the enterprise authority manager stores information indicative of authorized users.

6. The image management system as recited in claim 5 in which the enterprise authority manager is operable to deny access to unauthorized users.

7. The image management system as recited in claim 1 in which the processor means includes a plurality of stored rules which identify different actions to be performed and each identifies a set of parameters which must be present for the rule to be satisfied, wherein the different actions include storage of associated image data in each one of said plurality of
5 storage devices.

8. The image management system as recited in claim 7 in which one of said parameters is the identity of the image producing device.

9. The image management system as recited in claim 7 in which one of the parameters is the location of the image producing device.

10. The image management system as recited in claim 7 in which the image producing devices include medical imaging systems and one of said parameters is the imaging modality.

11. The image management system as recited in claim 10 in which one of said parameters is the subject of the image.

12. The image management system as recited in claim 7 in which one of said parameters is the subject of the image.

13. The image management system as recited in claim 2 in which the metadata includes information regarding the patient, a patient study, a series, patient body part, modality and procedure type.

14. The image management system as recited in claim 2 which includes an audit log stored in the database and the database management system is operable to record in the audit log information related to the metadata stored in the database.

15. The image management system as recited in claim 14 in which the information related to the metadata includes the dates on which the metadata is accessed and the identities of requesting users o.

16. An image management system connected to receive messages which contain image data and associated metadata from an image producing device, which comprises:

a plurality of storage devices, each storage device having cost and operating characteristics which differ from the other storage devices;

5 means connected to receive the messages;

processor means coupled to the means for receiving and being operable to examine metadata in received messages and parameters in a set of stored rules to determine in which of said plurality of storage devices the associated image data should be stored; and

10 means for storing the associated image data in the storage device determined by the processor means.

17. The image management system as recited in claim 16 in which one of the plurality of stored rules identifies one of said plurality of storage devices and one or more parameters that must be satisfied to store image data in that storage device.

18. The image management system as recited in claim 17 in which one of said parameters is the subject of the image and the metadata indicates the subject of its associated image data.

19. The image management system as recited in claim 17 which includes a workstation coupled to the processor means for enabling a user to input and edit said stored rules.

20. The image management system as recited in claim 20 in which the processor means is operable when selected rules are satisfied to produce a message indicating that the image data is to be transferred to another one of said storage devices at a later time, and in which the image management system also includes:

5 a persistent messaging service coupled to the processor means and being operable to store said message to be acted upon at a later time; and

means for acting on the stored message at said later time to transfer said image data to said another one of said storage devices.

21. The image management system as recited in claim 16 which includes a database management system coupled to the processor means and being operable to store the metadata in a database.

22. The image management system as recited in claim 21 which includes an audit log stored in the database and the database management system is operable to record in the audit log information related to the metadata stored in the database.

23. The image management system as recited in claim 22 in which the information related to the metadata includes the date on which the metadata is accessed and the identity of the requesting user.

24. A method for storing images produced by a plurality of medical imaging devices located in a health care enterprise, the steps comprising:

a) electronically sending each image to an image management system along with associated metadata that includes information about the image;

5 b) storing a set of rules in the image management system which indicates how images for the health care enterprise are to be stored;

c) evaluating a stored rule by examining the metadata associated with each image received by the image management system;

d) storing the received image in a manner indicated by a rule which is evaluated
10 as satisfied; and

e) storing the associated metadata in a database.

25. The method as recited in claim 24 in which step c) is performed by comparing parameters in a stored rule with information in the associated metadata to determine if the rule is satisfied.

26. The method as recited in claim 25 in which the parameters include the modality of the medical imaging device that produced the image.

27. The method as recited in claim 25 in which the parameters include the location within the health care enterprise of the medical imaging device that produced the image.

28. The method as recited in claim 25 in which the parameters include the subject matter depicted in the image.

29. The method as recited in claim 24 in which step d) includes storing the image in one of a plurality of different storage devices, each having different cost and performance characteristics.

30. The method as recited in claim 24 which includes:

f) changing the stored rules to reflect a change in the image storage policy of the health care enterprise.

31. The method as recited in claim 30 in which step f) is performed by:
- i) entering rule data at a workstation; and
 - ii) electronically sending the rule data to the image management system.

32. The method as recited in claim 24 in which step d) includes:
- storing the image in one of a plurality of different storage devices; and
- storing a message which indicates the image is to be transferred to another of said storage devices at a later time.